Clark County Concurrency

Administrative Manual

March 2001

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Introduction

"Concurrency" is the requirement that the public infrastructure needed to serve new development, such as roads, sewers, and schools, be in place or funded before those new developments are approved. For transportation, this requires that the impact of each proposed development be checked to ensure there is adequate capacity available on the public road system to serve the new traffic. In the event there is not, the development must be denied or the developer can elect to make improvements to add capacity to the road system.

Clark County Concurrency Program

The Concurrency Ordinance (CCC12.41), presently in effect in Clark County, was adopted in October 2000. The program framework and level-of-service standards established by this ordinance were first identified in the Clark County Growth Management Plan adopted in December 1994.

Under the Concurrency Program, all development applications for subdivisions, short-plats, conditional use permits, and site plan reviews are tested for transportation concurrency. The only developments not tested are those that generate less than one (1) peak hour trip onto an arterial/collector segment or intersection (CCC 12.41.050).

As part of the Concurrency Test, the estimated traffic from a proposed development **plus** existing traffic on the road system **plus** the estimated traffic from other new and approved developments (not yet built) is added and modeled to estimate the levels-of-service that would result after the proposed development, this estimated LOS is called the "operating level". These estimates are then compared with the level-of-service (LOS) standards established for that area of the County. If the estimated LOS resulting from the proposed development is less congested than the standard, then the Concurrency Test is passed. However, if the estimated LOS is more congested than the standard, then the development is considered to fail the Concurrency Test. Under these conditions, the development is either denied or the developer can elect to make improvements to add capacity such that the intersection(s) or roadway corridor(s) do not fail the Concurrency Test.

Four key principles, included and considered in the County's Concurrency Program are:

1) Designated "Concurrency Corridors" and "Intersections of Regional Significance" are tested for Concurrency ;
2) Both County and some state-owned intersections are tested for Concurrency;
3) Any peak traffic period during the day can be tested for Concurrency (e.g. AM, PM)
4) The added traffic capacity resulting from a future improvement project can be considered available if the project is considered and if the future County project is scheduled for construction within three (3) years.

Note that under Clark County's program, no advanced reservation of capacity can be made either at the time of the Pre-Application Conference or any other time prior to the Concurrency Test. Also, the County does not issue Certificates of Concurrency.

Level-of-Service Standards

The LOS standards used by Clark County have been defined in the Highway Capacity Manual (published by the Transportation Research Board) and range from LOS "A" to LOS "F". Level A represents the most uncongested condition possible with little or no delay at intersections and unrestricted travel movements on roadway segments. Level F represents highly congested conditions (approaching gridlock) with average delays at intersections of greater than 60 seconds and stop-and-go travel movements on roadway segments. The LOS standards currently in effect in Clark County are defined in greater detail in the Concurrency Ordinance (CCC12.41).

Concurrency Testing
A general description of the process used by applicants and County staff in testing Concurrency is as follows:

Step 1 - Scoping. Based on a review of the pre-application material and other traffic information, Clark County staff will identify the type of traffic report required: traffic impact study(TIS), traffic profile or concurrency survey and any special requests of data to be included.

Step 2 – Concurrency Submittal. As part of the development review application, applicants prepare and submit to Clark County the identified traffic report for the proposed development. The TIS must be prepared and stamped by a Professional Engineer licensed to practice in the State of Washington.

Step 3 - Fully Complete Determination. Clark County staff reviews the submitted application, to determine if the application is fully complete for concurrency. If complete, the number of vehicle trips identified in the traffic report for the proposed development, are initially reserved in our concurrency database (as of the concurrency vesting date).

Step 4 - Review of Transportation Impact Study. When the total development review application is deemed fully complete, Clark County staff begins the technical review of the submitted traffic materials for accuracy and consistency with County standards and practices. County has developed a computerized concurrency model for testing concurrency, data from the report is input into the model when applicable. Clark County has developed two computerized concurrency models for use in analyzing intersection and corridor level-of-service. These models are maintained by outside transportation consultants. The models utilize the TRAFFIX Transportation Analysis software.

Step 5 - Concurrency Testing. Using the data included as part of the applicant's traffic report and the results of any concurrency modeling, County staff reviews the extent to which the proposed development complies with the LOS standards. Developments that cause an intersection to exceed delay standards or a corridor to fall below travel speed standards are considered to "fail" Concurrency. Under these circumstances, the proposed development is either denied or the developer can elect to mitigate the impacts of the proposed development by making improvements to add capacity such that the intersection(s) or corridor(s) operates within the outlined acceptable Clark County standards.

Step 6 - Determine Mitigation (if required). If a proposed development causes or worsens the failure of an intersection or corridor the applicant must identify, volunteer, and commit to mitigation to gain conditional approval. The applicant is required to submit a written proposal that defines the mitigation (i.e. proposed improvement). The applicant must substantiate that the mitigation will remedy the problem and restore the intersection or corridor delays to an acceptable level-of-service.

Step 7 - Review of Proposed Mitigation. Following submittal of the proposed mitigation by the applicant, County staff reviews the proposed mitigation to ensure that the planned remedy will restore the level-of-service and is consistent with Clark County standards and practices.

Step 8 - Approval or Denial of Application. Following the seven-step process outlined above and if a development application passes the Concurrency Test, Clark County Transportation staff will recommend concurrency approval of the application to the County planner assigned to the development application. In the event the proposed development fails the Concurrency Test and no mitigation is identified to remedy the failing level-of-service, Transportation staff will recommend denial of the application.

Clark County Concurrency Ordinance

Available at www.co.clark.wa.us

Clark County Code 12.41

Operating Level Determination

Specific Corridor Guidelines

- In general, corridors are analyzed by the County, with conditions of approval to reimburse the County for outside expenses associated with the analysis
- Existing operating levels are based on travel speeds driven in the spring (April – May) or fall (September – October) by driving each corridor as many times as possible during one peak period on Tuesdays, Wednesdays, or Thursdays between 4-6 PM and possibly 6:30-8:30 AM.
- The travel speed methodology is that the driver moves with the general flow of traffic, e.g., if one car passes the driver, then the driver needs to pass one car. Note that this methodology may mean that the driver exceeds the speed limit in order to keep up with the flow of traffic. In those instances where there is no queue of cars to follow, the drivers are instructed to travel at the speed limit.
- Existing peak hour traffic counts at intersections are generally taken concurrent with the travel speed-driving program; however, developments seeking concurrency approval must also update any counts older than one year.
- For reference, the County is using Traffix™ Software to model corridor travel speeds and account for previously approved developments and background growth.
- Background growth rates inside corridors have generally been found to be about 1-3% per year in the urban areas.
- Travel speeds are rounded to the nearest 1-mph when making the operating level determination.

Types of Concurrency Reports

Traffic Impact Study

Any development generating 10 or more new trips is required to complete a traffic impact study. A general outline is provided in this manual as well as a clarification of the requirements and policy issues.

Traffic Profile (for a Minor Development)

The concurrency ordinance requires that any development generating 1 or more new trips be subject to concurrency review. A traffic profile will be performed for developments with less than 10 new trips. The profile will be performed by county staff based on information provided by the applicant on the form provided in this manual. Concurrency Staff may request additional information for review.

Concurrency Survey (for an exempted development)

The concurrency ordinance exempts some uses from concurrency evaluation; however, a concurrency survey will be required to account for such development and to identify any safety issues. The concurrency survey outline required from the applicant is outlined in this manual.

Traffic Impact Study Outline

- Background Information
  Site summary, vicinity map, and site plan .

- Trip Generation
  ADT, AM, PM and/or other peak hour trips generated by site or independent trip generation calculations, if different from ITE Trip Generation Manual

- Trip Distribution/Assignment
  Flow diagrams showing the distribution within study area
  State assumption/documentation used for the trip distribution
  Site generated turning movements at subject intersections

- Site Access(es)
  Roadway classification(s), descriptions serving site.
  Sight distance
  Level of Service analysis for accesses; existing and at build-out
  Evaluation of need for right or left turn lanes, storage capacity, and length
  Accident analysis where applicable

- Technical appendix

If there are 1 or more trips to a signalized or unsignalized regionally significant intersection (see arterial atlas), within the distance limitations that are not included in any corridor models, the following should be included:

- Roadway Information
  Speed limit, classification, lanes, turn lanes, etc at subject intersections
  Existing traffic counts at study intersections within 1 year for peak hour of adjacent street

- LOS Analysis at study intersections
  List in-process developments included
  Existing level of service
  Existing plus in-process plus projected background growth LOS
  Existing plus in-process plus projected background growth plus site build-out LOS

- Warrants/Safety Analysis
  Traffic Signal MUTCD warrant analysis and phasing at intersections, as required
  Evaluation of need for right or left turn lanes, storage capacity, and length
  Accident analysis with rate calculations and methodology

- Improvement/mitigation Recommendations
  Identification of possible corrections of any LOS deficiencies
  Identification of possible corrections of any warrant/safety deficiencies

Concurrency Survey Outline

- Background Information
  Site summary, vicinity map, site plan, and basis for exemption

- Trip Generation
  ADT, AM, PM and/or other peak hour trips generated by site or independent trip generation calculations, if different from ITE Trip Generation Manual

- Trip Distribution/Assignment
  Flow diagrams showing the distribution within study area
  State assumption/documentation used for the trip distribution
  Site generated turning movements at subject intersections

- Site Access(es)
  Roadway classification(s), descriptions serving site.
  Sight distance
  Level of Service analysis for accesses existing and at build-out
  Evaluation of need for right or left turn lanes, storage capacity, and length
  Accident analysis where applicable

- Technical appendix

If there are 1 or more trips to a signalized or unsignalized regionally significant intersection (see arterial atlas), within the distance limitations that are not included in any corridor models, the following should be included:

- Roadway Information
  Speed limit, classification, lanes, turn lanes, etc at subject intersections
  Existing traffic counts at study intersections within 1 year for peak hour of adjacent street

- Warrants/Safety Analysis
  Traffic Signal MUTCD warrants analysis and phasing at intersections, as required
  Evaluation of need for right or left turn lanes, storage capacity, and length
  Accident analysis with rate calculations and methodology

- Improvement/mitigation Recommendations
  Identification of possible corrections of any warrant/safety deficiencies

Content Guidelines for Traffic Reports

Background Information

- Current Washington PE stamp and signature is present.
- A qualification statement showing transportation/traffic expertise may be requested from staff.
- Vicinity Map showing the location of the site and include at least a 3 mile radius from the site.
- Roadway system description within study area, speed limit on the streets, current lane configurations at the intersections in the study area are presented.
- Clear site plan indicating site access location and number of units/square footage (8-1/2 x 11)
- Include County roadway improvements that could impact the analysis of the future traffic condition. Improvements need to be listed as reasonably funded.

Trip Generation / Distribution/Assignment and Corridors

- Trip generation should reflect equations and rates from the current ITE Trip Generation Manual unless ITE procedure recommends local data collections.
- Trip generation based on independent trip generation calculations must consider the following: use data from the existing site if the proposed development is enlarging a building or moving locations, and/or similar facilities (competitors or other buildings in a chain store). If it is from an existing site, then the traffic study should use the existing trip rate calculation for the future trip projections. If it is from similar sites, we need data from a minimum of 3 similar sized and located facilities.
- Trip generation rate is for the peak hour of the adjacent street, unless the development will tend to have a "peaky" tendency for trip generation during the weekday or weekend. In this case, use the peak of the generator and compare with the street peak hour during the same day to see what hour is worse (this is usually done for weekends). The analysis should be for worst case scenario.
- Traffic study presents information and provides justification for making the following types of trip distinctions, as applicable.
    1. Internal vs. External Trips (for sites with multiple uses)
    2. Pass-by vs. Non-pass-by trips (based on ITE; verify to see if reasonable when compared with street traffic (i.e. pass-by trips of 100, but existing trips on road are only 100). Be skeptical if ITE rates are more than 5% of the future roadway traffic in front of the site. Be aware that pass-by trips can ONLY occur at the site driveways and can only come from vehicles normally traveling the roads where the site driveways touch. For example, trips coming from a nearby interstate to visit the site, then returning to the interstate are new diverted trips and not pass-by trip.
    3. New Diverted vs. New Primary Trips. This needs to be verified with ITE or data presented by the applicant. If there are new diverted trips, then a figure needs to show where trips are added and removed.
    4. Recheck that the sum of all of the trip distributions sum to the total trips projected for the site.
- Provide tables/diagrams that clearly show the different classification of trips, as applicable and the net trips added at intersections, including the site driveways.
- Staff will generally not accept operational or time of day changes or commitments to decrease trip generation.
- The applicant should provide trip generation, distribution, and assignment data to guide staff on how far the concurrency review extends from the site in accordance with CCC 12.41.060 E.
- Trip distribution diagrams extend in accordance with CCC12.41.060 E.
- If trip distribution is in dispute staff will defer to most recent RTC modeling distributions.
- Specialty Retail is not an accepted use, since it is statistically invalid.
- Off Peak Generating Uses The County is interested in the worst case scenario for the analysis. If the applicant's traffic study can prove and document that the worst case traffic impacts are during the weekday PM peak hour, rather than the weekend peak hour, then the traffic study scope can be reduced to include only those intersections on the weekend which have a higher delay than during the weekday PM peak hour. The intersections, which are marked as site access onto the collector/arterial system, must be analyzed, regardless of weekday or weekend impact, unless the proposed development assigns less than 10 peak hour trips to the

intersection. The applicant is advised to inform County staff of these assumptions prior to submittal of the traffic study.

- Credits for existing facilities being replaced To get trip credits for an existing facility, the existing facility trips must be counted at the site driveways. The trips counted at the driveways can be subtracted from the total trips calculated for the new proposed site. In other words, the following calculations would be performed: Total trips calculated for future site (ITE) – Total trips counted at existing site = total trip increase (or decrease) at the site driveways (call these external trips). From this number, the traffic study can then take reductions for pass-by and diverted trips based on the predicted use. This assumes that the existing trips can be clearly isolated to a specific use that is being demolished and that this calculation is logical and reasonable(ie. Building a larger supermarket and demolishing an existing smaller supermarket may not make sense unless specific data can demonstrate this."

Site Access

- Sight distance measurements at site access intersections (CCC 12.05.250) and not just estimates that they exceed the minimum standard.
- Accident analysis with rate calculations and methodology. If the accident rate is greater than 1.0 accidents per million entering vehicles, what is the solution to fixing the problem?
- Turn lane warrants evaluations to check the need for right or left turn lanes. Existing storage capacity and future required length.
- LOS analysis for the existing accesses and future at build-out.

LOS Analysis at Study intersections

- Existing traffic counts at study intersections were done within 1 year of the traffic study's formal submittal date as part of the complete application. The raw data counts are included in report.
- Background rates outside modeled areas should be assumed at 2% per year unless the applicant provides evidence to the contrary
- A future build-out year of three years is to be assumed for development, except commercial short plats and commercial subdivisions, which should assume a future build-out of six years.
- List in-process developments included.
- If there are any new links in the transportation system being created, indicate any changes in distribution of future traffic.
- Existing level-of-service at arterial / collector intersections in the study area, per the scoping letter, is reported in a table to include backup HCM analysis in the appendix using the most recent HCM that has adequate software analysis availability.
- LOS for existing + background + in-process numbers = future conditions without site
- LOS for existing + background + in-process numbers = future conditions with site at build-out

Warrants/Safety Analysis

- Accident analysis with rate calculations and methodology. If the accident rate is greater than 1.0 accidents per million entering vehicles, what is the solution to fixing the problem.
- Accident data can be obtained from Mr. Huan Vuu at (360) 397-6118 ext. 4341.
- If an unsignalized intersection is failing, a traffic signal MUTCD warrant analysis is required.
- Turn lane warrants evaluations to check the need for right or left turn lanes on the major street at unsignalized intersections. Existing storage capacity and future required length.
- Queuing analyses should be conducted at subject intersections.
- Analysis should use the most recently adopted HCM unless otherwise directed by staff.

Improvement/Mitigation

- Ensure all LOS deficiencies are identified and solutions to correct any failing LOS are presented.
- Include an illustration for future lane configurations is provided if it is different from the existing situation.
- Mitigation must be volunteered to gain concurrency approval.
- Mitigation should be operational at latest by occupancy.
- Mitigation on Corridors If the impact of a proposed development degrades the travel speed below the standard the applicant will be contacted. The applicant will then have an opportunity to identify mitigation at intersections and roadway links the proposed development impacts.

Other

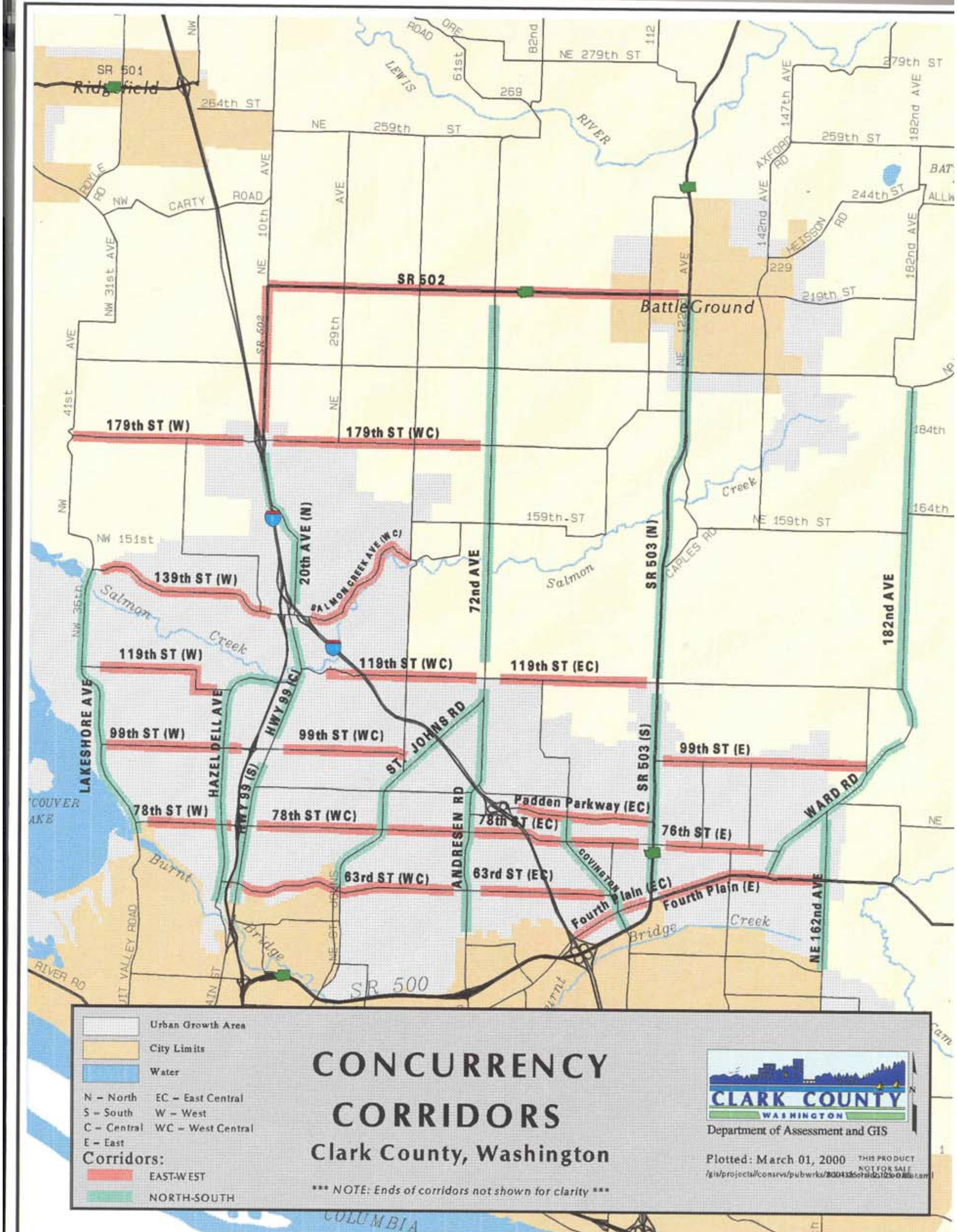
- During the review process if the proposed use or size changes a new traffic study may be required or if significant addendum is anticipated.
- If a road modification request is part of the application, the baseline traffic impact study shall be done assuming the road modification request will not be approved.
- Technical appendix - including sufficient material to convey complete understanding of traffic issues (e.g. HCM analyses, trip generation calculations, raw traffic count data, trip distribution data presented, trip distinction verification presented, in-process developments used and their trip assignment)

Appendix

Corridor Map

Corridor Table

Traffic Profile Form


CONCURRENCY
CORRIDORS
Clark County, Washington
Urban Growth Area
City Limits
Water
N – North
S – South
C – Central
E – East
EC – East Central
W – West
WC – West Central
Corridors:
EAST-WEST
NORTH-SOUTH
*** NOTE: Ends of corridors not shown for clarity ***
CLARK COUNTY
WASHINGTON
Department of Assessment and GIS
Plotted: March 01, 2000
THIS PRODUCT NOT FOR SALE
SR 502
179th ST (W)
179th ST (WC)
139th ST (W)
SALMON CREEK AVE (W C)
20th AVE (N)
72nd AVE
SR 503 (N)
182nd AVE
119th ST (W)
119th ST (WC)
119th ST (EC)
99th ST (W)
99th ST (WC)
99th ST (E)
LAKESHORE AVE
HAZEL DELL AVE
HWY 99 (C)
HWY 99 (S)
ST. JOHNS RD
SR 503 (S)
WARD RD
78th ST (W)
78th ST (WC)
78th ST (EC)
76th ST (E)
Padden Parkway (EC)
ANDRESEN RD
COVINGTON
63rd ST (WC)
63rd ST (EC)
Fourth Plain (EC)
Fourth Plain (E)
NE 162nd AVE
Battle Ground
Ridgefield
SR 501
SR 500
COLUMBIA

CORRIDORS	Corridor Limits Description	Minimum Travel Speeds (mph)
North-South Roadways		
Lakeshore Avenue	Bliss Road to NE 78th Street	22
Hazel Dell Avenue	Highway 99 to NE 63rd Street	22
Highway 99 & NE 20th Avenue		
NE 20th Avenue (North)	NE 179th Street to south of NE 134th Street	17
Central	north of NE 134th Street to NE 99th Street	13
South	NE 99th Street to NE 63rd Street	17
St. Johns Road	NE 119th Street to NE 68th Street	22
NE 72nd Avenue	SR-502 to NE 119th Street	27
Andresen Road	NE 119th Street to NE 58th Street	13
Gher / Covington Road	Padden to SR-500	17
SR-503		
North	SR-502 to NE 119th Street	27
South	NE 119th Street to Fourth Plain	13
Ward Road	Davis Road to SR-500	13
NE 162nd Avenue	Ward Road to NE 39th Street	22
NE 182nd Avenue	Risto Road to Davis Road	27
East-West Roadways		
SR-502	SR-503 to NE 179th Street	27
179th Street		
West	NW 41st Avenue to I-5	22
West Central	I-5 to NE 72nd Avenue	22
139th Street & Salmon Creek Avenue		
139th Street (West)	Seward Road to I-5	22
Salmon Creek Avenue (West Central)	I-5 to NE 50th Avenue	22
119th Street		
West	Lakeshore to Hazel Dell	22
West Central	Highway 99 to NE 72nd Avenue	17
East Central	NE 72nd Avenue to SR-503	22
99th Street		
West	Lakeshore to I-5	22
West Central	I-5 to St. Johns Road	22
East	SR-503 to NE 172nd Avenue	22
Padden Parkway (East Central)	I-205 to SR-503	22
78th / 76th Street		
West	Lakeshore to I-5	17
West Central	I-5 to Andresen	17
East Central	Andresen to SR-503	17
East	SR-503 to Ward Road	17
Fourth Plain Boulevard		
East Central	I-205 to SR-503	13
East	SR-503 to 162nd Avenue	13
63rd Street		
West Central	Hazel Dell to Andresen	22
East Central	Andresen to NE 107th Avenue	17

Traffic Profile (for Minor Development)

(To be completed by Applicant)

Attach the following:
Vicinity Map(at least 2 mile radius)
Development Site Plan 8-1/2”x11”

Date:

Development Name:

Activity Number:

Estimated Date of Full Occupancy or Build-out:

Site Summary: (include any existing structures to remain/to be replaced, type of proposed development, size (square footage) of building, number of units for proposed development, etc)